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05/05/09

Focused Subsurface Investigation

King County Tax Parcel: 2136200681
7303 8th Avenue South
Seattle, Washington 98108

May 5, 2009

Prepared For:
R & A Properties, LLC
18325 SE 145th Street
Renton, Washington 98059

Prepared by:
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ATTACHMENTS

EXECUTIVE SUMMARY

Environmental Management Services completed a focused subsurface investigation at 7303 8th Avenue South, Seattle, Washington (Site). The Site is located in the industrial area along the Duwamish Waterway, west of Boeing field, South Seattle in King County, Washington.

The Site is currently occupied by CleanScapes, Inc. (CleanScape), a residential and commercial solid waste collection company. CleanScape is in the process of tenant renovations that include the cleaning and maintenance of the properties stormwater system and the installation of a natural gas commercial fleet fueling system. Refer to the Property Location Map attached in Appendix A, Project Figures.

EMS understands that the site has been used by a trucking company, Puget Sound Truck Lines since the mid 1960's. King County Assessor's records list R & A Properties, LLC as the current property owner and Puget Sound Truck Lines as the property tenant. The lot area is listed as 166,816 square feet (3.83 acres), housing a 12,440 square foot building and commercially zoned. The Property is overlain with asphalt and abuts the Duwamish Waterway along the western boundary.

According to documents reviewed, four underground storage tanks (UST) were removed from the Property in June 1991 by Puget Sound Truck Lines (the tenant). Diesel impacted soil exceeding the Washington Department of Ecology (Ecology) cleanup level of 2,000 milligrams per kilogram (mg/kg) was identified and reported to Ecology. Subsequent contaminated soil cleanup activities were conducted by the tenant and a UST Closure Report was issued. A portion of the contaminated soil was reportedly remediated on site. The remedial activities conducted at that time, including sampling protocol and laboratory analysis; do not meet the current Model Toxics Control Act (MTCA) regulatory criteria for industrial properties. Primarily, groundwater underlying the former UST excavation was not characterized following either the UST closure or subsequent soil remediation.

Due to the historical activities, specifically the UST closure and subsequent soil remediation and lack of groundwater data, EMS recommended a Phase II Environmental Site Assessment, focusing on the historical waste oil UST excavation area and the diesel / gasoline UST excavation area. As per the scope of work (EMS Proposed Scope of Work March 2009), EMS completed two soil borings (CSB1 & CSB2) immediately down-gradient of the former waste oil excavation to a total depth of 16 feet below ground surface (bgs). Four soil borings (CSB3 – CSB6) were completed around the perimeter of the former diesel and gasoline UST excavation

to depths ranging from 10 feet below ground surface (bgs) to 16 feet bgs. The static groundwater elevation stabilized at approximately 9 to 11 feet bgs.

Each boring was chosen to best represent subsurface conditions near the former UST excavation area and completed using direct push drilling techniques. Focus was placed on what is considered the "down gradient" area west of the former UST excavation. The borings were advanced continuously until encountering groundwater or refusal using 2-inch stainless steel hollow samplers with new disposable liners. Discrete soil samples were collected from two depth intervals (4'-8' & 12'-16') bgs.

Following soil sampling activities, all of the borings were converted into temporary groundwater monitoring wells and six (6) groundwater samples were collected using appropriate low flow sampling techniques.

Each of the soil and groundwater samples were delivered to Fremont Analytical, an Ecology accredited laboratory for chemical analysis. Each discrete soil and groundwater sample was analyzed for gasoline range petroleum hydrocarbons (GRO) by NWTPH-Gx, select volatile aromatic hydrocarbons benzene, toluene, ethylbenzene and xylene (BTEX) by method 8021B, and diesel/heavy oil range petroleum hydrocarbons (DRO/RRO) by NWTPH-Dx/Dx-Ext.

EMS utilized the Department of Ecology, Model Toxics Control Act (MTCA) Method A Unrestricted Cleanup Levels (Attachment B) for soil and groundwater

FINDINGS

Chemical analysis for the soil media was selected based on historical site use, suspected contaminates associated with that usage, primarily, gasoline and diesel range petroleum hydrocarbons.

Laboratory analytical results for soil samples collected and analyzed reported one sample exceeding the MTCA Method A Cleanup Levels (MTCA-A). Laboratory analytical results for soil sample CSB6-2-040309 reported gasoline range organic concentrations at 230 milligrams per kilogram (mg/kg), exceeding the MTCA-A cleanup level of 100 mg/kg.

The laboratory analytical results reported soil samples exceeding the laboratory method reporting limit (MRL) but below the MTCA-A cleanup levels in soil for heavy oil (CSB6-2), toluene (CSB6-2), ethylbenzene (CSB1-1, CSB6-1, CSB6-2), total xylenes (CSB6-1, CSB6-2), gasoline range organics (CSB3-1, CSB3-2, CSB6-1), diesel range organics (CSB6-2), and lead (CSB1-2, CSB2-2).

Laboratory analytical results reported water samples exceeding the laboratory MRL but below the MTCA-A cleanup levels in water for toluene (CSB3-H_2O), ethylbenzene (CSB3-H_2O), total xylenes (CSB3-H_2O), gasoline range organics (CSB6-H_2O), diesel range organics (CSB3-H_2O, CSB6-H_2O), and lead (CSB1-H_2O, CSB2-H_2O, CSB3-H_2O, CSB6-H_2O).

EMS presents the laboratory analytical results, MRL and MTCA-A values in Attachment B, Tables 1 and 2.

OPINION

EMS identified gasoline range hydrocarbon in soil samples from boring CSB6-2 exceeding the MTCA-A cleanup level of 100 mg/kg. This sample was collected at an elevation consistent with soil underlying the former USTs.

Based on the limited scope of this investigation, specifically number of borings and their placement around the former UST excavation, further delineation of the impacted soil is warranted.

1.0 INTRODUCTION

Environmental Management Services LLC (EMS) was retained by R & A Properties, LLC to conduct a Focused Subsurface Investigation at the subject property located at 7303 8th Avenue South, Seattle, Washington (the "Site").

1.1 Background

According to historical fire insurance maps and topographic maps, city directory information, and aerial photographs the Site was originally developed industrially as early as 1920. Numerous additional businesses appear on the Site by 1950. Puget Sound Truck Lines first appears in directories dated 1972, at an adjacent address of 7308 8th Avenue South, which was likely the location of the main office.

1.2 Scope of Services

EMS conducted the following tasks.

- Review the previous Phase I ESA environmental activities.
- Prepare/conduct a Focused Subsurface Investigation for subject property.
- Sample subsurface media using direct push sampling techniques.
- Complete chemical analysis for site-specific contaminants of concern on selected samples.
- Complete a sampling report summarizing sampling activities and laboratory findings.

1.3 Health & Safety

A site-specific Health and Safety Plan (HASP) was prepared in accordance with Chapter 296-62 of the Washington Administrative Code (WAC) and 29 CFR 1910.120 (Code of Federal Regulations). The HASP identified potential physical and chemical hazards and specified personal protection and safety monitoring requirements. Site health and safety meetings were conducted during fieldwork at the beginning of the project to review aspects of the HASP, and to provide an opportunity for EMS site workers and contractor personnel to discuss health and safety issues or concerns. On-site EMS personnel associated with the field activities were required to be familiar with and comply with provisions put forth in the HASP. Subcontractors on-site were required to have their own HASP that identified potential physical and chemical hazards associated with their own work activities.

1.4 Utility Location Identification

Prior to implementing subsurface sampling activities at the Site, EMS notified the public underground utilities alert network of intrusive activities. The service contacted appropriate agencies or companies with underground utilities in the area. These agencies then marked the location of their utilities along the right-of-ways and easements of the Site.

2.0 SITE AND VICINITY CHARACTERISTICS

The Site is located in the industrial area along the Duwamish Waterway, west of Boeing field, South Seattle in King County, Washington. The Site is currently occupied by CleanScapes. The Site is on the west side of 8th Avenue South and south of South Othello Street as shown on the Site Location Map, Figure 1. Figure 2, Sample and Boring Map, depicts the parceled layout of the Site. Figures are presented in Appendix A. Site photographs are presented in Figure 3 of Appendix A.

2.1 Legal Description of Property

The Site is comprised of one parcel identified King County Tax Parcel 2136200681 located at 7303 8th Avenue South, Seattle, Washington. The Site is currently occupied by Clean Scapes. The King County Assessor records list the owner/taxpayer as R & A Properties. The abbreviated legal description is as follows:

- DUWAMISH INDUSTRIAL ADD TGW N 1/2 S FONTANELLE ST ADJ

2.2 Property and Vicinity General Characteristics

The Site is in the process of tenant renovations and is presently occupied by CleanScapes, a garbage collection and recycling Service Company on contract with the City of Seattle. Renovations are being completed on the existing building. There is new construction taking place in the northeastern portion of the Site where cement footings are being poured. Large construction related dumpsters and a construction trailer occupy the northern central portion of the Site. The Site is bounded on the southwest by the Duwamish Waterway and by industrial facilities on the remaining adjacent properties.

3.0 PHYSICAL SETTING

Geologic conditions can often affect, to some extent, the environmental integrity of Site. Underlying soil and bedrock formations may facilitate or impede the migration of chemical contaminants in groundwater, and may even be the source of contaminants such as radon and metals. This section of the report summarizes geologic factors that may affect the Property with regard to environmental concerns.

3.1 Topography

The United States Geological Survey (USGS), Quadrangle Seattle South, WA Quadrangle 7.5-Minute series topographic map (1983) was reviewed. According to the contour lines on the topographic map, the Site is located at approximately 10 - 15 feet above mean sea level in an area known as the Duwamish Industrial. The topographic contour lines in the vicinity of the Site indicate the gradient is relatively flat and the western boundary slopes steeply toward the west about ten feet down to the Duwamish River.

3.2 Geology and Soils

The Site is located in the region of the Puget Lowlands an elongated topographic and structural depression filled with complex sequences of glacial and nonglacial sediments that overlie bedrock. Continental ice sheets up to 3,000 feet thick covered portions of the Puget Lowland several times during the Quaternary period. Retreating ice carved new landscapes, rechanneled rivers, drained or formed lakes, and deposited glacial drift including till and outwash (WA DNR, 2002). According to the Geologic Map of Seattle, the Site overlies Alluvium deposits (Qal) that primarily consist of sand, silt, gravel, and cobbles deposited by streams and running water (Troost, Booth, Wisher, & Shimel, 2005). Alluvium deposits may also contain landslide debris, soft peat lenses, and colluvium at margins.

The Natural Resources Conservation Services (NRCS) Washington Soil Survey Report for King County, Washington indicates no soil maps are available for the vicinity of the Site. This is typical of soil surveys in historically urban settings, due to the amount of fill material that may have been brought in, massive excavating and/or most surfaces are covered by buildings or asphalt. The subject Site is completely asphalt paved.

3.3 Hydrogeologic Environment

The primary aquifers in the Puget Sound region are typically overlain by relatively impermeable glacial till deposits that are present at or near the ground surface. Within these till deposits are localized areas or lenses of water-bearing sands and gravels that may result in a shallow, perched water table. Lateral and vertical migration of shallow groundwater may be impeded by the relatively impermeable nature of the till and by the sometimes-discontinuous nature of the perched water-bearing sands and gravel. Perched and discontinuous zones of shallow groundwater may be seasonally or perennially present, depending on site-specific conditions.

Water to the vicinity of the Site is provided the Seattle Public Utilities water system that receives water from the Tolt River and Cedar Rivers. Shallow groundwater flow directions fluctuate and tend to follow topographic gradient but are also affected by seasonal high water tables and variable soil porosity characteristics. Groundwater migration pathways may also follow underground conduits. The closest water body to the Site is the Duwamish River along the western Property boundary. Refer to Figures, Appendix A.

4.0 INVESTIGATION FIELD ACTIVITIES AND OBSERVATIONS

EMS mobilized to the Site on April 3rd, 2009. EMS senior project manager/geologist, Robin Hamlet, completed filed activities including drilling and soil and groundwater sampling. Northwest Probe completed all drilling/probing activities with a direct-push drill rig. These activities include the completion of six (6) direct-push soil probe borings.

4.1 Soil Sampling Activities

EMS completed six (6) direct push borings (CSB1, CSB2, CSB3, CSB4, CSB5 and CSB6) at select locations (see Sample and Boring Location Map, Attachment A, Figure 2) adjacent to two former UST excavation areas. All borings were advanced continuously untill reaching groundwater or refusal, using 2-inch diameter stainless steel hollow samplers with new disposable liners.

Soil samples retrieved when using the direct push equipment were collected using a 2-inch diameter, 4-foot long stainless steel sampler fitted with virgin acetate liners. The sampling technique consisted of advancing the sampler starting from the surface in five-foot increments. This sampling method allowed for the continuous review of soil from each boring location.

Borings CSB1 and CSB2 were advanced to a total depth of 16 feet bgs, encountering groundwater at nine (9) feet bgs. Boring CSB3 was advanced between the former UST excavation and the existing building to a total depth of 15 feet bgs encountering groundwater at 11 feet bgs. Boring CSB4 was advanced east of the former UST excavation (as an up-gradient location), to a total depth of 14 feet bgs encountering groundwater at six (6) bgs. Boring CSB5 was advanced at the southeast end of the concrete pad overlying the former UST excavation meeting refusal at 10 feet bgs and encountering groundwater at a depth of nine (9) feet bgs. Boring CSB6 was advanced at the north corner of the concrete pad overlying the former UST excavation to a total depth of 16 feet bgs and encountered groundwater at seven (7) feet bgs.

Based on observations gathered during drilling activities, the subsurface soil conditions underlying the study areas consist of gravel and concrete debris backfill materials underlain by clayey, slightly silty sands. The inferred groundwater flow direction is to the southwest towards the Duwamish Water Way approximately 200 feet southwest of the former gasoline & diesel UST excavation (Figure 3).

Each discrete soil sample was field screened for olfactory, staining and sheen, typical indicators of petroleum impact. Petroleum hydrocarbon odors were detected during the identification and

collection of soil and groundwater samples in borings CSB3 and CSB6. The soils and soil column were logged in general accordance with the unified soil classification system. Soil descriptions and field screening results were recorded on the boring logs provided in Attachment D. Soil samples were placed into laboratory-supplied, manufacturer-cleaned 4 oz. glass jars with Teflon® lined plastic lids and 40 milliliter volatile organic analysis (VOA) sampling vials and maintained at 4° Celsius in a chilled cooler until delivered to a Washington State accredited analytical laboratory for chemical analysis.

4.3 Groundwater

Following soil sampling activities, each of the borings were converted into temporary groundwater monitoring wells. Six groundwater samples were collected.

Groundwater was encountered, at the time of drilling (ATD), in all six (6) borings advanced across the Site. Groundwater depth ranged from approximately 6 feet bgs to 11 feet bgs. Samples were collected using low-flow sampling technology, disposable tubing and placed into laboratory-supplied, manufacturer-cleaned glass jars with Teflon®-lined plastic lids and maintained at 4° Celsius in a chilled cooler until delivered to a Washington State accredited analytical laboratory for chemical analysis.

5.0 LABORATORY ANALYSIS & RESULTS

Chemical analysis for the soil media was selected based on suspected historical site use, suspected contaminates associated with that usage and previous investigations. Ten (10) discrete soil samples and six (6) groundwater samples were analyzed for gasoline range petroleum hydrocarbons (GRO) by NWTPH-Gx, select volatile aromatic hydrocarbon benzene, toluene, ethylbenzne and total xylenes (BTEX) by EPA Method 8021B and diesel/heavy oil range petroleum hydrocarbons (DRO/RRO) by NWTPH-Dx and lead by EPA Method 6020. Soil samples chosen for analysis were selected to investigate the presence or absence of petroleum hydrocarbons immediately adjecet to the former UST remedial excavation. Laboratory analytical results and chain-of-custody are presented in Attachment C.

5.1 Soil Sample Analytical Results

Laboratory analytical results for soil samples collected and analyzed from borings CSB1, CSB2, CSB3 and CSB4 reported non-detect or less than the laboratories method reporting limit (MRL) for GRO, BTEX, DRO & RRO except for one sample (CSB1-1-040309) which was reported containing ethylbenzene at 0.08 milligrams per kilograms (mg/kg), above the MRL limit of 0.05 mg/kg but below the MTCA Method A Cleanup Level (MTCA-A) for soils of 6 mg/kg. Lead was detected in samples CSB1-2-040309, CSB2-2-040309 and CSB3-2-040309 at concentrations of 1.5 mg/kg, 1.5 mg/kg and .97 mg/kg, respectively, above the MRL but below the MTCA Method A Cleanup Level for soils of 1,000 mg/kg.

Laboratory analytical results for soil sample CSB3-1-040309 reported non-detects for diesel range hydrocarbons, benzene, toluene, ethylbenzene, xylenes and lead. Analytical results reported a gasoline concentration of 5.5 mg/kg, above the MRL of 5.0 mg/kg but below the MTCA Method A Cleanup Level of 100 mg/kg. Laboratory analytical results for sample CSB3-2-040309 reported non-detects for, volatile organic compounds benzene, toluene, ethylbenzene and xylenes diesel range hydrocarbons and gasoline concentration of 9.6 mg/kg, above the MRL of 5.0 mg/kg but below the MTCA Method A Cleanup Level of 100 mg/kg.

Laboratory analytical results for sample CSB6-1-040309 reported non-detects for diesel range hydrocarbons, volatile organic compounds benzene, toluene, and total lead. Results reported volatile organic compounds ethylbenzene and xylene at concentrations at 0.08 mg/kg and 0.15 mg/kg, above the laboratory MRL but below the MTCA Method A Cleanup Levels of 6 mg/kg and 9 mg/kg, respectively. The results also reported a gasoline concentration of 65 mg/kg, exceeding the laboratory MRL of 5.0 mg/kg but below the MTCA Method A Cleanup Level of 100 mg/kg.

Laboratory analytical results for sample CSB6-2-040309 reported non-detects for diesel and benzene. Results reported motor oil at a concentration of 28 mg/kg below both the laboratory MRL and the MTCA-A level of 2000 mg/kg. Toluene, ethylbenzene and xylenes were reported at concentrations above the MRL but below the MTCA-A cleanup levels of 7 mg/kg, 6 mg/kg and 9 mg/kg, respectively. Gasoline concentrations were reported at 230 mg/kg exceeding the MTCA Method A Cleanup Level of 100 mg/kg.

5.2 Groundwater

Laboratory analytical results for groundwater samples CSB1-H2O, CSB2-H2O, CSB4-H2O and CSB5-H2O reported less than the MRL for diesel range and gasoline range hydrocarbons. Analytical results for lead in samples CSB1-H2O and CSB2-H2O reported concentrations above the MRL but below the MTCA-A cleanup levels. Lead was not detected in samples CSB4-H2O and CSB5-H2O. Analytical results for sample CSB3-H2O reported concentrations of diesel, gasoline, toluene, ethylbenzene, xylenes and lead at concentration below the laboratory MRL and the applicable MTCA-A cleanup levels. Analytical results for sample CSB6-H2O reported concentrations of heavy oils below the laboratory MRL and the MTCA-A cleanup levels and concentrations of gasoline and lead above the MRLs but below the MTCA-A cleanup levels.

6.0 CONCLUSIONS

Ten (10) discrete soil samples and six (6) groundwater samples were analyzed from six (6) boring locations. The sample locations, both boring locations and sample depths, were selected to best characterize the subsurface for potential impact from former USTs present on the Site. Chemical analysis for each discrete sample was based on information provided in the EMS 2009 Phase I Environmental Site Assessment (Tables 1 & 2).

Based on the laboratory analytical results, there appears to be gasoline impact soils (230 mg/kg) exceeding the MTCA-A Cleanup Level of 100 mg/kg in the vicinity of the former UST excavation. Although the soil sample, CSB6-2-040309, was collected below the ATD groundwater elevation (12-14 feet bgs), season fluctuations in groundwater lower to a point below the soil sample elevation and are most likely tidily influenced.

EMS also identified groundwater in the vicinity of the former UST excavation has been impacted by heavy oils and gasoline at concentrations above the laboratory method reporting limit but below the MTCA Method A Groundwater Cleanup Levels.

6.1 Opinion

EMS identified gasoline range hydrocarbon in soil samples from boring CSB6-2 exceeding the MTCA-A cleanup level of 100 mg/kg. This sample was collected at an elevation consistent with soil underlying the former USTs.

Based on the limited scope of this investigation, specifically the number of borings and their placement around the former UST excavation, further delineation of the impacted soil is warranted.

Attachment A

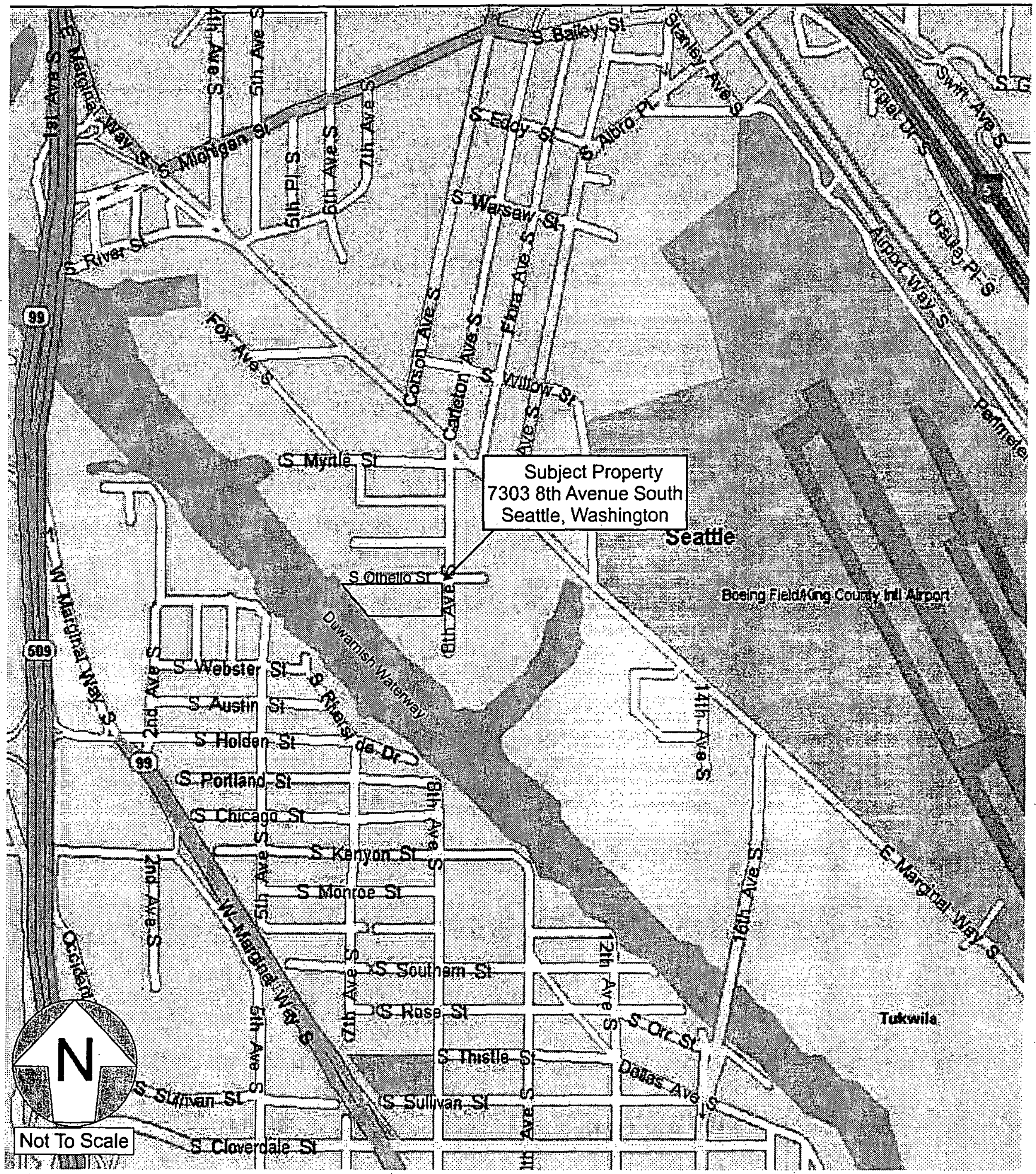
List Of Figures

Figure 1- Site Location Map

Figure 2 - Boring Location Map

Figure 3 - Project Photos

Attachment A
List Of Figures



Environmental Services www.emsgroupllc.com	Site Location Map Environmental Assessment 7303 8th Avenue South Seattle, Washington 98108	Date: April 14, 2009 Completed: K. Allegretti Checked By: C. Foley Version No: 001	Figure No. 01

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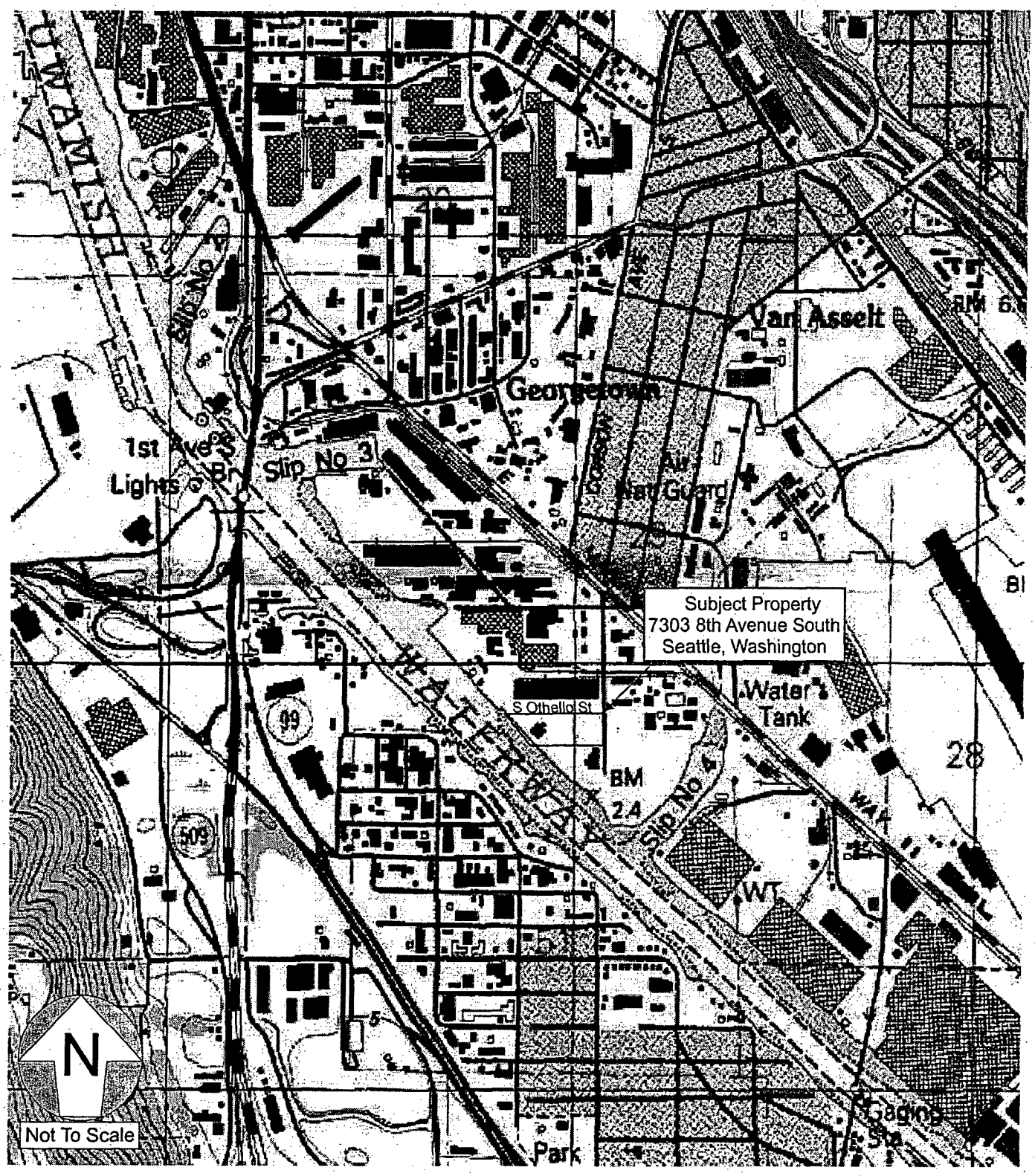
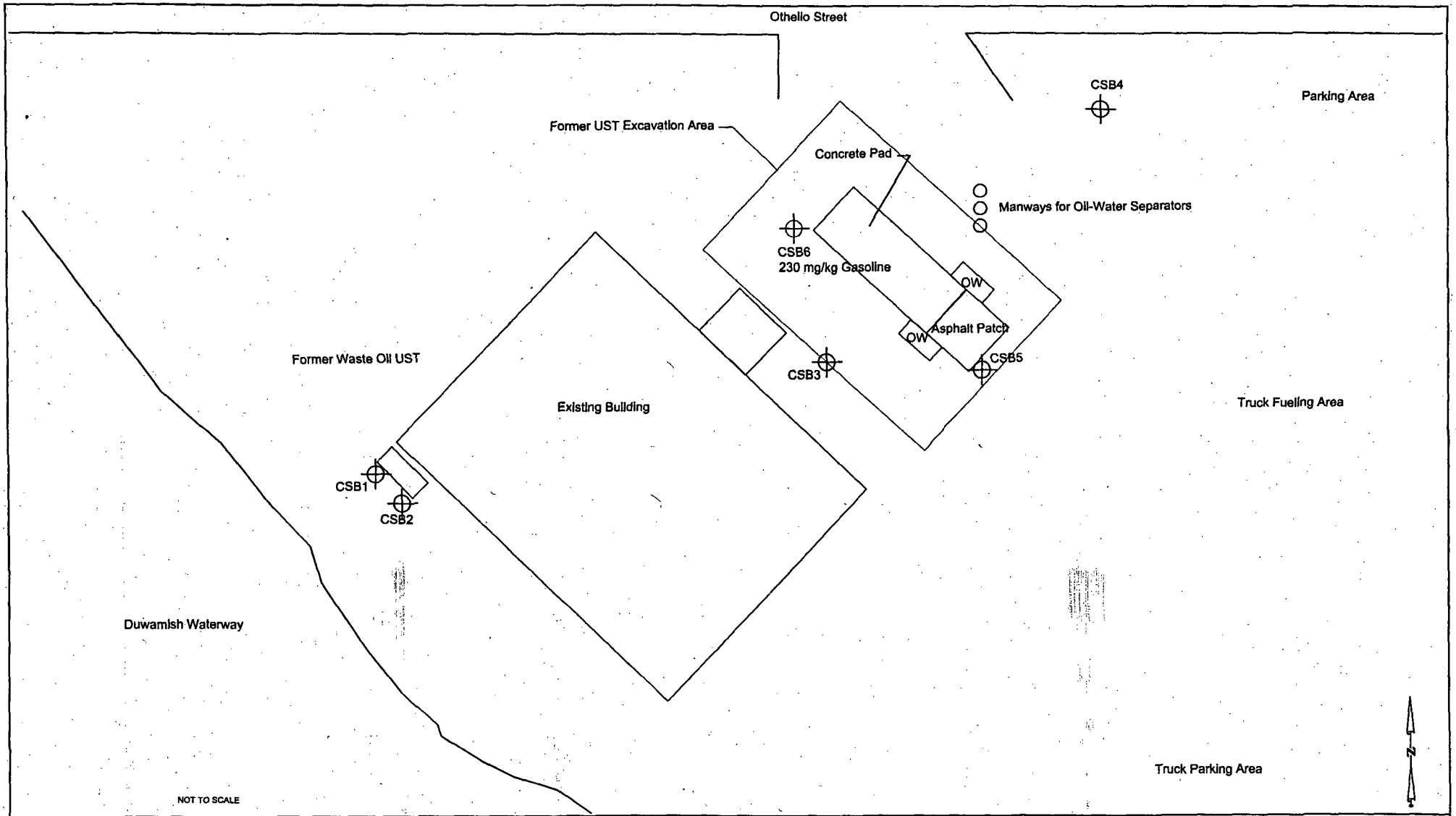


ems Environmental Services www.emsgroupllc.com	Site Tpopgraphic Map Environmental Assessment 7303 8th Avenue South Seattle, Washington 98108	Date: April 14, 2009 Completed: K. Allegretti Checked By: C. Foley Version No: 001	Figure No. 02



Legend CSB1 Direct Push Boring Location CSB6 Sample Location Exceeding MTCA-A	PROJECT NAME: Clean Scapes LOCATION: 7303 8th Avenue South Seattle, Washington PROJECT TYPE: Focused Phase II Investigation	Date: April 7, 2009 Drawn By: RPH Checked By: SMS	Boring & Sample Location Map	FIGURE 3

Photo 01 - Former Waste Oil UST Location

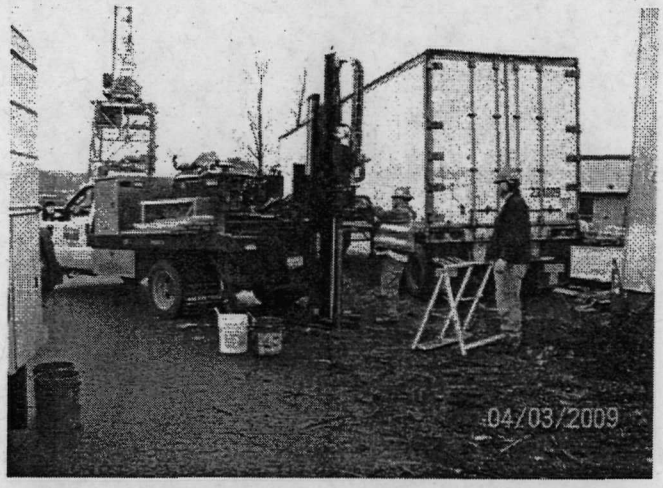


Photo 02 - Installing Boring CSB1 at Waste Oil Location

Photo 03 - Boring CBS3 Location

Photo 04 - Boring CSB4 Location

Photo 05 - Boring CSB5 Location

Photo 06 - Boring CSB6 Location

ems Environmental Services www.emsgroupllc.com	Project Photographs Focused Phase II Investigation 7303 8th Avenue South Seattle, Washington	Date: April 8, 2009 Completed: R. Hamlet Checked By: S. Spencer Version No: 001	Figure No. 3 Sheet No. 01-01

Attachment B

Project Tables

Table 1 - Soil Sample Analytical Results
Table 2 - Groundwater Sample Analytical Results

Attachment B
Project Tables

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Table 1 - Soil Sample
Analytical Results - Hydrocarbons
7303 8th Avenue South
Seattle, Washington

4/8/2009

Sample Number	Sample Location	Sample Depth	Sample Type	Sample Date	Results		NWTPH-Dx/Ext		NWTPH-Gx	Volatile Aromatic Hydrocarbons (8021b)				Metals
					Odor	Sheen Test	Diesel	Motor Oil	Gasoline	Benzene	Toluene	Ethyl benzene	Xylene	Lead
		feet bgs			Result	Result	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
CSB1-1-040309	CSB1	4'-8'	SOIL	40309	No	No	ND	N D	ND	ND	ND	0.08	ND	NA
CSB1-2-040309	CSB1	12'-14'	SOIL	40309	No	No	ND	ND	ND	ND	ND	ND	ND	1.50
CSB2-1-040309	CSB2	4'-8'	SOIL	40309	No	No	ND	ND	ND	ND	ND	ND	ND	NA
CSB2-2-040309	CSB2	12'-16'	SOIL	40309	No	No	ND	ND	ND	ND	ND	ND	ND	1.50
CSB3-1-040309	CSB3	4'-8'	SOIL	40309	Yes	Yes	ND	ND	ND	ND	ND	ND	ND	NA
CSB3-2-040309	CSB3	12'-15'	SOIL	40309	Yes	Yes	ND	ND	ND	ND	ND	ND	ND	0.97J
CSB4-1-040309	CSB4	6'-8'	SOIL	40309	Yes	No	ND	ND	ND	ND	ND	ND	ND	NA
CSB4-2-040309	CSB4	12'-14'	SOIL	40309	Yes	No	ND	ND	ND	ND	ND	ND	ND	NA
CSB6-1-040309	CSB6	6'-8'	SOIL	40309	Yes	Yes	ND	ND	65.0	ND	ND	0.08	0.15	NA
CSB6-2-040309	CSB6	12'-16'	SOIL	40309	Yes	Yes	ND	28.0	**230.0**	ND	0.09	0.36	0.57	NA
Laboratory Detection or Practical Quantification Limit Soil							10.0	50.0	1.0	0.03	0.05	0.05	0.06	1
Department of Ecology MTCA Method A Soil Cleanup Levels (Table 740-1)							2000	2000	100	0.03	7	6	9	1000

< # (ND) = analyte not detected above the analytical method detection limit cited.

bgs=below ground surface

NA=Not Applicable

BOLD/RED = Elevated Analyte Reading

Values are reported in milligrams per kilograms (mg/kg).

Attachment C

Analytical Results

Sample Analytical Results
Sample Chain Of Custody

Attachment C
Analytical Results

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Fremont Analytical

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Environmental Management Services, LLC
Attn: Robin Hamlet
PO Box 153
652 8th Ave.
Fox Island, WA 98333

RE: Clean Scapes
Fremont Project No: CHM090403-6

April 9th, 2009

Robin:

Enclosed are the analytical results for the ***Clean Scapes*** soil & water samples submitted to Fremont Analytical on Friday April 3rd, 2009.

The samples were received in good condition - in the proper containers (40mL VOAs preserved with MeOH or HCL, 4oz soil jars, 500mL Ambers, 500mL HDPE bottles) properly sealed, labeled and within holding time. The samples were analyzed and stored in a refrigeration unit at the USEPA-recommended temperature of 4°C ± 2°C. There were no sample receipt or sample analysis issues to report.

Examination of these samples was conducted for the presence of the following:

- ***Gasoline (NWTPH-Gx) and BTEX (EPA Method 8021B) in Soil and Water***
- ***Diesel and Heavy Oil in Soil and Water by NWTPH-Dx/Dx Ext.***
- ***Total Metals (Pb) in Soil and Water by EPA Method 6020***

These applications were performed under Washington State Department of Ecology accreditation parameters. All appropriate Quality Assurance / Quality Control method parameters have been applied.

Please contact the laboratory if you should have any questions about the report.

Thank you for using Fremont Analytical!

Sincerely,

Michael Dee
Sr. Chemist / Principal
mikedee@fremontanalytical.com

Fremont Analytical

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Analysis of Gasoline (NWTPH-Gx) and BTEX (EPA Method 8021B) in Soil

Project: Clean Scapes
Client: EMS
Client Project #: N/A
Lab Project #: CHM090403-6

8021B+NWTPH-Gx (mg/kg)	MRL	Method Blank	LCS	CSB1-1 040309	CSB1-2 040309	CSB2-1 040309	CSB2-2 040309	CSB3-1 040309	CSB3-2 040309
Date Preserved				4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	4/3/09
Date Analyzed		4/7/09	4/7/09	4/7/09	4/7/09	4/7/09	4/7/09	4/7/09	4/7/09
Matrix				Soil	Soil	Soil	Soil	Soil	Soil
8021B (mg/kg)									
Benzene	0.02	nd	96%	nd	nd	nd	nd	nd	nd
Toluene	0.05	nd	98%	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.05	nd		**0.08**	nd	nd	nd	nd	nd
Total Xylenes	0.15	nd		nd	nd	nd	nd	nd	nd
NWTPH-Gx (mg/kg)									
Gasoline	5.0	nd	120%	nd	nd	nd	nd	nd	nd
Gasoline Range Hydrocarbons (GRO)*	5.0	nd		nd	nd	nd	nd	**5.5**	**9.6**
Surrogate Recovery									
(Surr 1) a,a,a-Trifluorotoluene		79%	97%	100%	85%	86%	82%	85%	89%
(Surr 2) Bromofluorobenzene		88%	97%	115%	88%	92%	88%	96%	98%

"nd" Indicates not detected at listed reporting limits
"C" Indicates coelution prevents determination
"J" Indicates estimated value
"MRL" Indicates Method Reporting Limits
"LCS" Indicates Laboratory Control Sample
"MS" Indicates Matrix Spike
"MSD" Indicates Matrix Spike Duplicate
"RPD" Indicates Relative Percent Difference
" * " Indicates presence of petroleum distilate

Acceptable RPD % is determined to be less than 30%
Acceptable Recovery Limits:
Surrogate = 65% to 135%
LCS, LCSD, MS, MSD = 65% to 135%
Surrogate Concentration = 1.25 mg/kg
BTEX Spike Concentration = 0.5 mg/kg
Gx Spike Concentration = 10.0 mg/kg
GRO = C6-C12

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Analysis of Gasoline (NWTPH-Gx) and BTEX (EPA Method 8021B) in Soil

Project: Clean Scapes
Client: EMS
Client Project #: N/A
Lab Project #: CHM090403-6

						Duplicate		MS	MSD	
8021B+NWTPH-Gx (mg/kg)	**MRL**	**CSB4-1 040309**	**CSB4-2 040309**	**CSB6-1 040309**	**CSB6-2 040309**	**CSB6-2 040309**	**RPD**	**CSB2-1 040309**	**CSB2-1 040309**	**RPD**
Date Preserved		4/3/09	4/3/09	4/3/09	4/3/09	4/3/09	%	4/3/09	4/3/09	%
Date Analyzed		4/7/09	4/7/09	4/7/09	4/7/09	4/7/09		4/7/09	4/7/09	
Matrix		Soil	Soil	Soil	Soil	Soil		Soil	Soil	
8021B (mg/kg)										
Benzene	0.02	nd	nd	nd	nd	nd		89%	87%	2%
Toluene	0.05	nd	nd	nd	**0.09**	**0.09**	0%	93%	98%	5%
Ethylbenzene	0.05	nd	nd	**0.08**	**0.36**	**0.35**	3%			
Total Xylenes	0.15	nd	nd	**0.15**	**0.57**	**0.57**	0%			
NWTPH-Gx (mg/kg)										
Gasoline	5.0	nd	nd	nd	nd	nd				
Gasoline Range Hydrocarbons (GRO)*	5.0	nd	nd	**65**	**230**	**220**	4%			
Surrogate Recovery										
(Surr 1) a,a,a-Trifluorotoluene		81%	86%	89%	91%	80%		87%	89%	
(Surr 2) Bromofluorobenzene		97%	92%	C	C	C		90%	93%	

"nd" Indicates not detected at listed reporting limits
"C" Indicates coelution prevents determination
"J" Indicates estimated value
"MRL" Indicates Method Reporting Limits
"LCS" Indicates Laboratory Control Sample
"MS" Indicates Matrix Spike
"MSD" Indicates Matrix Spike Duplicate
"RPD" Indicates Relative Percent Difference
"*" Indicates presence of petroleum distilate

Acceptable RPD % is determined to be less than 30%
Acceptable Recovery Limits:
Surrogate = 65% to 135%
LCS, LCSD, MS, MSD = 65% to 135%
Surrogate Concentration = 1.25 mg/kg
BTEX Spike Concentration = 0.5 mg/kg
Gx Spike Concentration = 10.0 mg/kg
GRO = C6-C12

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Analysis of Gasoline (NWTPH-Gx) and BTEX (EPA Method 8021B) in Water

Project: Clean Scapes
Client: EMS
Client Project #: N/A
Lab Project #: CHM090403-6

8021B+NWTPH-Gx (ug/L)	MRL	Method Blank	LCS	CSB1-H_2O	CSB2-H_2O	CSB3-H_2O	CSB4-H_2O	CSB5-H_2O
Date Analyzed		4/7/09	4/7/09	4/7/09	4/7/09	4/7/09	4/7/09	4/7/09
Matrix				Water	Water	Water	Water	Water
8021B (ug/L)								
Benzene	1.0	nd	95%	nd	nd	nd	nd	nd
Toluene	1.0	nd	97%	nd	nd	**1.8**	nd	nd
Ethylbenzene	1.0	nd		nd	nd	**1.9**	nd	nd
Total Xylenes	2.0	nd		nd	nd	**3.3**	nd	nd
NWTPH-Gx (ug/L)								
Gasoline	100	nd		nd	nd	nd	nd	nd
Gasoline Range Hydrocarbons (GRO)*	100	nd		nd	nd	**480**	nd	nd
Surrogate Recovery								
(Surr 1) a,a,a-Trifluorotoluene		75%	93%	73%	90%	134%	73%	92%
(Surr 2) Bromofluorobenzene		82%	90%	81%	98%	C	78%	86%

"nd" Indicates not detected at listed reporting limits.
"C" Indicates coelution prevents determination
"J" Indicates estimated value
"MRL" Indicates Method Reporting Limits
"LCS" Indicates Laboratory Control Sample
"MS" Indicates Matrix Spike
"MSD" Indicates Matrix Spike Duplicate
"RPD" Indicates Relative Percent Difference
" * " Indicates presence of petroleum distilate

Acceptable RPD % is determined to be less than 30%
Acceptable Recovery Limits:
Surrogate = 65% to 135%
LCS, LCSD, MS, MSD = 65% to 135%
Surrogates and Spike Concentration = 25 ug/L
GRO = C6-C12

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Analysis of Gasoline (NWTPH-Gx) and BTEX (EPA Method 8021B) in Water

Project: Clean Scapes
Client: EMS
Client Project #: N/A
Lab Project #: CHM090403-6

8021B+NWTPH-Gx (ug/L)	MRL	CSB6-H_2O	Duplicate CSB6-H_2O	RPD	MS CSB6-H_2O	MSD CSB6-H_2O	RPD
Date Analyzed		4/7/09	4/7/09		4/7/09	4/7/09	
Matrix		Water	Water		Water	Water	
8021B (ug/L)							
Benzene	1.0	nd	nd		94%	94%	0%
Toluene	1.0	nd	nd		89%	90%	1%
Ethylbenzene	1.0	nd	nd				
Total Xylenes	2.0	nd	nd				
NWTPH-Gx (ug/L)							
Gasoline	100	nd	nd				
Gasoline Range Hydrocarbons (GRO)*	100	**520**	**560**	7%			
Surrogate Recovery							
(Surr 1) a,a,a-Trifluorotoluene		94%	79%		92%	93%	
(Surr 2) Bromofluorobenzene		C	C		89%	89%	

"nd" Indicates not detected at listed reporting limits
"C" Indicates coelution prevents determination
"J" Indicates estimated value
"MRL" Indicates Method Reporting Limits
"LCS" Indicates Laboratory Control Sample
"MS" Indicates Matrix Spike
"MSD" Indicates Matrix Spike Duplicate
"RPD" Indicates Relative Percent Difference
" * " Indicates presence of petroleum distilate

Acceptable RPD % is determined to be less than 30%
Acceptable Recovery Limits:
Surrogate = 65% to 135%
LCS, LCSD, MS, MSD = 65% to 135%
Surrogates and Spike Concentration = 25 ug/L
GRO = C6-C12

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Analysis of Diesel and Heavy Oil in Soil by NWTPH-Dx / Dx Ext.

Project: Clean Scapes
Client: EMS
Client Project #: N/A
Lab Project #: CHM090403-6

NWTPH-Dx/Dx Ext. (mg/kg)	MRL	Method Blank	CSB1-1 040309	CSB1-1 040309 Duplicate	CSB1-2 040309	CSB2-1 040309	CSB2-2 040309	CSB3-1 040309	CSB3-2 040309
Date Extracted		4/6/09	4/6/09	4/6/09	4/6/09	4/6/09	4/6/09	4/6/09	4/6/09
Date Analyzed		4/6/09	4/6/09	4/6/09	4/6/09	4/6/09	4/6/09	4/6/09	4/6/09
Matrix			Soil	Soil	Soil	Soil	Soil	Soil	Soil
Diesel Range Organics (DRO)	20	nd	nd	nd	nd	nd	nd	nd	nd
Mineral Oil	40	nd	nd	nd	nd	nd	nd	nd	nd
Heavy Oil	50	nd	nd	nd	nd	nd	nd	nd	nd
Surrogate Recovery									
(Surr 1) 2-Fluorobiphenol		96%	103%	105%	100%	105%	102%	103%	100%
(Surr 2) o-Terphenol		90%	87%	92%	91%	93%	94%	97%	90%

"nd" Indicates not detected at listed reporting limits
"int" Indicates that interference prevents determination
"J" Indicates estimated value
"C" Indicates coelution prevents determination
"RPD" Indicates Relative Percent Difference
"MRL" Indicates Method Reporting Limit

Acceptable RPD is determined to be less than 30%
Acceptable Recovery Limits:
Surrogate = 65% to 135%
Surrogate Concentration = 5 mg/kg
Diesel (Fuel Oil) = C12-C24
Mineral Oil = C15-C40
Heavy Oil = C24-C40

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Analysis of Diesel and Heavy Oil in Soil by NWTPH-Dx / Dx Ext.

Project: Clean Scapes
Client: EMS
Client Project #: N/A
Lab Project #: CHM090403-6

NWTPH-Dx/Dx Ext. (mg/kg)	MRL	CSB4-1 040309	CSB4-2 040309	CSB6-1 040309	CSB6-2 040309
Date Extracted		4/6/09	4/6/09	4/6/09	4/6/09
Date Analyzed		4/6/09	4/6/09	4/6/09	4/6/09
Matrix		Soil	Soil	Soil	Soil
Diesel Range Organics (DRO)	20	nd	nd	nd	**28**
Mineral Oil	40	nd	nd	nd	nd
Heavy Oil	50	nd	nd	nd	nd
Surrogate Recovery					
(Surr 1) 2-Fluorobiphenol		99%	104%	95%	95%
(Surr 2) o-Terphenol		96%	98%	95%	90%

"nd" Indicates not detected at listed reporting limits
"int" Indicates that interference prevents determination
"J" Indicates estimated value
"C" Indicates coelution prevents determination
"RPD" Indicates Relative Percent Difference
"MRL" Indicates Method Reporting Limit

Acceptable RPD is determined to be less than 30%
Acceptable Recovery Limits:
Surrogate = 65% to 135%
Surrogate Concentration = 5 mg/kg
Diesel (Fuel Oil) = C12-C24
Mineral Oil = C15-C40
Heavy Oil = C24-C40

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Analysis of Diesel and Heavy Oil in Water by NWTPH-Dx / Dx Ext.

Project: Clean Scapes
Client: EMS
Client Project #: N/A
Lab Project #: CHM090403-6

NWTPH-Dx/Dx Ext. (µg/L)	MRL	Method Blank	CSB1-H_2O	CSB2-H_2O	CSB3-H_2O	CSB4-H_2O
Date Extracted		4/8/09	4/8/09	4/8/09	4/8/09	4/8/09
Date Analyzed		4/8/09	4/8/09	4/8/09	4/8/09	4/8/09
Matrix			Water	Water	Water	Water
Diesel Range Organics (DRO)	100	nd	nd	nd	**420**	nd
Mineral Oil	100	nd	nd	nd	nd	nd
Heavy Oil	200	nd	nd	nd	nd	nd
Surrogate Recovery						
(Surr 1) 2-Fluorobiphenol		81%	74%	91%	114%	75%
(Surr 2) o-Terphenol		75%	76%	69%	67%	91%

"nd" Indicates not detected at listed reporting limits
"int" Indicates that interference prevents determination
"J" Indicates estimated value
"C" Indicates coelution prevents determination
"RPD" Indicates Relative Percent Difference
"MRL" Indicates Method Reporting Limit

Acceptable RPD is determined to be less than 30%
Acceptable Recovery Limits:
Surrogate = 65% to 135%
Surrogate Concentration = 5 mg/L
Diesel (Fuel Oil) = C12-C24
Mineral Oil = C15-C40
Heavy Oil = C24-C40

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Analysis of Diesel and Heavy Oil in Water by NWTPH-Dx / Dx Ext.

Project: Clean Scapes
Client: EMS
Client Project #: N/A
Lab Project #: CHM090403-6

			Duplicate	
NWTPH-Dx/Dx Ext. (µg/L)	**MRL**	**CSB5-H_2O**	**CSB5-H_2O**	**CSB6-H_2O**
Date Extracted		4/8/09	4/8/09	4/8/09
Date Analyzed		4/8/09	4/8/09	4/8/09
Matrix		Water	Water	Water
Diesel Range Organics (DRO)	100	nd	nd	**220**
Mineral Oil	100	nd	nd	nd
Heavy Oil	200	nd	nd	nd
Surrogate Recovery				
(Surr 1) 2-Fluorobiphenol		73%	65%	70%
(Surr 2) o-Terphenol		86%	81%	68%

"nd" Indicates not detected at listed reporting limits
"int" Indicates that interference prevents determination
"J" Indicates estimated value
"C" Indicates coelution prevents determination
"RPD" Indicates Relative Percent Difference
"MRL" Indicates Method Reporting Limit

Acceptable RPD is determined to be less than 30%
Acceptable Recovery Limits:
Surrogate = 65% to 135%
Surrogate Concentration = 5 mg/L
Diesel (Fuel Oil) = C12-C24
Mineral Oil = C15-C40
Heavy Oil = C24-C40

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Analysis of Total Metals in Soil by EPA Method 6020

Project: Clean Scapes
Client: EMS
Client Project #: N/A
Lab Project #: CHM090403-6

							Duplicate	
EPA 6020 (mg/kg)	**MRL**	**Method Blank**	**LCS**	**CSB1-2 040309**	**CSB2-2 040309**	**CSB3-2 040309**	**CSB3-2 040309**	**RPD**
Date Extracted		4/8/09	4/8/09	4/8/09	4/8/09	4/8/09	4/8/09	%
Date Analyzed		4/9/09	4/9/09	4/9/09	4/9/09	4/9/09	4/9/09	
Matrix				Soil	Soil	Soil	Soil	
Lead (Pb)	1.0	nd	130%	**1.5**	**1.5**	**0.97 *J***	**1.1**	13%

"nd" Indicates no detection at the listed reporting limits
"int" Indicates that interference prevents determination
"J" Indicates estimated value
"MRL" Indicates Method Reporting Limit
"LCS" Indicates Laboratory Control Sample
"MS" Indicates Matrix Spike
"MSD" Indicates Matrix Spike Duplicate
"RPD" Indicates Relative Percent Difference

Acceptable RPD is determined to be less than 30%
Acceptable Recovery Limits:
LCS, LCSD, MS, MSD: 65% to 135%
Spiked Soil Concentrations:
Pb = 25 mg/kg

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Analysis of Total Metals in Soil by EPA Method 6020

Project: Clean Scapes
Client: EMS
Client Project #: N/A
Lab Project #: CHM090403-6

EPA 6020 (mg/kg)	MRL	MS Batch 090403-7-1	MSD Batch 090403-7-1	RPD
Date Extracted		4/8/09	4/8/09	%
Date Analyzed		4/9/09	4/9/09	
Matrix		Soil	Soil	
Lead (Pb)	1.0	107%	110%	3%

"nd" Indicates no detection at the listed reporting limits
"int" Indicates that interference prevents determination
"J" Indicates estimated value
"MRL" Indicates Method Reporting Limit
"LCS" Indicates Laboratory Control Sample
"MS" Indicates Matrix Spike
"MSD" Indicates Matrix Spike Duplicate
"RPD" Indicates Relative Percent Difference

Acceptable RPD is determined to be less than 30%
Acceptable Recovery Limits:
LCS, LCSD, MS, MSD: 65% to 135%
Spiked Soil Concentrations:
Pb = 25 mg/kg

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Analysis of Total Metals in Water by EPA Method 6020

Project: Clean Scapes
Client: EMS
Client Project #: N/A
Lab Project #: CHM090403-6

EPA 6020 (mg/L)	MRL	Method Blank	LCS	CSB1-H_2O	Duplicate CSB1-H_2O	RPD	CSB2-H_2O
Date Extracted		4/6/09	4/6/09	4/6/09	4/6/09	%	4/6/09
Date Analyzed		4/9/09	4/9/09	4/9/09	4/9/09		4/9/09
Matrix				Water	Water		Water
Lead (Pb)	0.002	nd	98%	**0.023**	**0.025**	8%	**0.009**

"nd" Indicates no detection at the listed reporting limits
"int" Indicates that interference prevents determination
"J" Indicates estimated value
"MRL" Indicates Method Reporting Limit
"LCS" Indicates Laboratory Control Sample
"MS" Indicates Matrix Spike
"MSD" Indicates Matrix Spike Duplicate
"RPD" Indicates Relative Percent Difference

Acceptable RPD is determined to be less than 30%
Acceptable Recovery Limits:
LCS, LCSD, MS, MSD: 65% to 135%
Spike Concentrations:
Pb = 50 µg/L

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Analysis of Total Metals in Water by EPA Method 6020

Project: Clean Scapes
Client: EMS
Client Project #: N/A
Lab Project #: CHM090403-6

EPA 6020 (mg/L)	MRL	CSB3-H_2O	CSB6-H_2O	MS *Batch 090403-4-1*	MSD *Batch 090403-4-1*	RPD
Date Extracted		4/6/09	4/6/09	4/6/09	4/6/09	%
Date Analyzed		4/9/09	4/9/09	4/9/09	4/9/09	
Matrix		Water	Water	Water	Water	
Lead (Pb)	0.002	**0.002**	**0.003**	101%	94%	7%

"nd" Indicates no detection at the listed reporting limits
"int" Indicates that interference prevents determination
"J" Indicates estimated value
"MRL" Indicates Method Reporting Limit
"LCS" Indicates Laboratory Control Sample
"MS" Indicates Matrix Spike
"MSD" Indicates Matrix Spike Duplicate
"RPD" Indicates Relative Percent Difference

Acceptable RPD is determined to be less than 30%
Acceptable Recovery Limits:
LCS, LCSD, MS, MSD: 65% to 135%
Spike Concentrations:
Pb = 50 µg/L

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Chain of Custody Record

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Laboratory Project No (internal): CHM090403-6

Date: 4/3/09 Page: 1 of: 3

Client: EMS
Address: 912 6th Ave, W
City, State, Zip: Tacoma WA 98466 Tel: 253-238-9270

Project Name: Custom Scapes
Location: Tacoma, WA
Collected by: R. Hamlett

Reports To (PM): Robin Hamlett Fax: Email: Project No:

Sample Name	Time	Sample Type (Matrix)	Container Type	Date of Collection	VOA 8260	VOA 8021B BTEX	NWTPH-Gx	NWTPH-HCID	NWTPH-Dx Ext.	SEMI VOL 8270C	PAH 8270	PCBs 8082	Cl PESTICIDES 8081	Cl HERBICIDES 8151A	Lead Metals* Total (T) & Dissolved (D)	Anions (IC)**			Comments/Depth
1 CS01-1-040309	0905	SOIL	40 mL 4oz	4/3/09		X	X		X										
2 CS01-2-040309	0915					X	X		X						X				
3 CS02-1-040309	0938					X	X		X										
4 CS02-2-040309	0944					X	X		X						X				
5 CS03-1-040309	1010					X	X		X										MILD PETROLEUM ODOR
6 CS03-2-040309	1014					X	X		X						X				STRONG PETROLEUM ODOR
7 CS04-1-040309	1110					X	X		X										FAINT PETROLEUM ODOR
8 CS04-2-040309	1113					X	X		X										FAINT PETROLEUM ODOR
9 CS05-1-040309																			
10 CS05-2-040309																			

*Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL

**Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Floride Nitrate+Nitrite

Relinquished	Date/Time	Received	Date/Time:
x Robin Hamlett	4/3/09 1335	x	4/3/09 1335
Relinquished	Date/Time	Received	Date/Time:
x		x	

Sample Receipt:	
Good?	Y
Temperature:	0°C
Seals Intact?:	Y
Total Number of Containers:	32

Special Remarks

TAT --> 24HR 48HR Standard

Distribution: White - Lab, Yellow - File, Pink - Originator

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Chain of Custody Record

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Laboratory Project No (Internal): CHM090403-6

Date: 4/3/09 Page: 1 of: 3

Client: EMS
Address: 1912 64th Ave. W.
City, State, Zip: Tacoma WA 98466 Tel: 253-238-9270
Reports To (PM): Robin Hamlet Fax: Email:

Project Name: Cleary Scraps
Location: Tukwila
Collected by: R. Hamlet
Project No:

	Sample Name	Time	Sample Type (Matrix)	Container Type	Date of Collection	VOA 8260	VOA 8021B BTEX	NWTPH-Gx	NWTPH-HCID	NWTPH-Dx Ext.	SEMI VOL 8270C	PAH 8270	PCBs 8082	Cl PESTICIDES 8081	Cl HERBICIDES 8151A	Metals* Total (T) / Dissolved (D)	Anions (IC)**			Comments/Depth
1	CS86-1-040309	1218	Soil	40 mL 4oz	4/3/09		X	X		X										Strong Petroleum Odor
2	CS130-2-040309	1225	1	1	1		X	X		X										Strong Petroleum Odor
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

*Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL

**Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Floride Nitrate+Nitrite

Relinquished	Date/Time	Received	Date/Time:
x Robin Hamlet	4/3/09 1325	x	4/3/09 1335
Relinquished	Date/Time	Received	Date/Time:
x		x	

Sample Receipt:
Good?
Temperature: SEE PG 2
Seals Intact?
Total Number of Containers:

Special Remarks

TAT --> 24HR 48HR Standard

Distribution: White - Lab, Yellow - File, Pink - Originator

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Chain of Custody Record

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Laboratory Project No (internal): CHM090403-6

Date: 4/3/09 Page: 3 of: 3

Client: EMS
Address: 1912 64th AVE. W.
City, State, Zip: TACOMA, WA 98466 Tel: 253-238-9270
Reports To (PM): ROBIN HAMLET Fax: Email:

Project Name: CLEAN SCAPES
Location: TUKWILA
Collected by: R HAMLET
Project No:

	Sample Name	Time	Sample Type (Matrix)	Container Type	Date of Collection	VOA 8260	VOA 8021B BTEX	NWTPH-Gx	NWTPH-HCID	NWTPH-Dx Ext.	SEMI VOL 8270C	PAH 8270	PCBs 8082	Cl PESTICIDES 8081	Cl HERBICIDES 8151A	Metals* Lead	Total (T) | Dissolved (D)	Anions (IC)**			Comments/Depth
1	CSB1-H2O	0925	WATER	40 mL 500 mL	4/3/09		X	X		X						X	T				
2	CSB2-H2O	0950		500mL poly			X	Y		X						Y	T				
3	CSB3-H2O	1020					X	Y		X						X					PETROLEUM ODOR
4	CSB4-H2O	1120					X	X		Y											PETROLEUM ODOR
5	CSB5-H2O	1150					X	X		X											
6	CSB6-H2O	1235					X	X		X						X					PETROLEUM ODOR
7																					
8																					
9																					
10																					

*Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL

**Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Floride Nitrate+Nitrite

Relinquished	Date/Time	Received	Date/Time:
x Robin Hamlet	4/3/09 1325		4/3/09 1335
Relinquished	Date/Time	Received	Date/Time:
x		x	

Sample Receipt:

Good?		
Temperature:	SEE PG	1
Seals Intact?:		
Total Number of Containers:		

Special Remarks

TAT --> 24HR 48HR Standard

Distribution: White - Lab, Yellow - File, Pink - Originator

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Attachment D

Boring Logs

Attachment D
Boring Logs

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Boring Number:	CSB1	Sheet Number:	1	of	1
Job Name:	Clean Scapes		Date:	4/3/2009	
Client:	R&A Properties. LLC				
Location:	7303 8th Avenue South, Seattle, WA				
Casing Depth:	NA	Surface Elevation:	NA		Water Levevl:
Well Screen Size:	NA	Drilling Type:	Direct Push		8.5' ATD
Surface Conditions:	Dirt				Drilling:
Longitude:				Start	Finish
Latitude:			Time:	900	930
Comments:	Down-gradient side of former waste oil tank.				

Inches Driven	Inches Recovered	Sample Number	Sample Depth	Field Reading	Depth to Water	Boring Depth	Soil Description
						0	Dirt surface
						1	Dark brown clayey topsoil
						2	Gravels and concrete fill (Fill Materials)
						3	
						4	Dk. Brown, dense, med-fine grained, sl. Silty SAND (SM)
		CSB1-1				5	Dk. Brown, loose, med-fine grained, sl. Silty SAND (SM) No petroleum odors
						6	
						7	Becoming clayey
					▽	8	
		CSB1-H20				9	Medium brown, stiff SILT w. fine sand sl. Clayey, wet (ML) *Groundwater level at time of drilling (ATD) 8.5' bgs*
						10	
						11	
						12	
		CSB1-2				13	Medium brown, dense, med-fine grained SAND, sl. Clayey, wet (SC) No petroleum odors
						14	
						15	Total Depth (TD) 14' bgs
						16	
						17	
						18	
						19	
						20	

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Boring Number:	CSB2	Sheet Number:	1	of	1
Job Name:	Clean Scapes		Date:	4/3/2009	
Client:	R&A Properties. LLC				
Location:	7303 8th Avenue South, Seattle, WA				
Casing Depth:	NA	Surface Elevation:	NA		Water Levevl:
Well Screen Size:	NA	Drilling Type:	Direct Push		9.0' ATD
Surface Conditions:	Dirt				Drilling:
		Longitude:	NA		Start / Finish
		Latitude:	NA	Time:	934 / 948
		Comments:	Down-gradient side of former waste oil tank.		

Inches Driven	Inches Recovered	Sample Number	Sample Depth	Field Reading	Depth to Water	Boring Depth	Soil Description
						0	Dirt surface
							Dark brown clayey topsoil
						1	Gravel & concrete debris with tr. of fines (Fill Materials)
						2	
						3	
						4	
						5	Dark brown loose, med-fine grained SAND sl. Silty, dry (SM)
		CSB2-1				6	
						7	Becoming clayey & moist
						8	
					▽	9	Med. Brown, stiff, sl. Sandy SILT, wet *Groundwater level ATD 8.5' bgs* (ML)
						10	
						11	
		CSB2-H2O				12	Med. Brown, dense, med-fine grained SAND sl. Silty, wet
						13	Dark brown, dense, med-fine grained SAND sl. Silty, trace of clay, wet (SM)
		CSB2-2				14	
						15	
						16	
						17	Total Depth (TD) 16' bgs
						18	
						19	
						20	

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Boring Number:	CSB3	Sheet Number:	1	of	1
Job Name:	Clean Scapes		Date:	4/3/2009	
Client:	R&A Properties. LLC				
Location:	7303 8th Avenue South, Seattle, WA				
Casing Depth:	NA	Surface Elevation:	NA		Water Levevl:
Well Screen Size:	NA	Drilling Type:	Direct Push		11' ATD
Surface Conditions:	Asphalt				Drilling:
Longitude:	NA			Start	Finish
Latitude:	NA		Time:	1000	1045
Comments:	Down-gradient of former UST excavation				

Inches Driven	Inches Recovered	Sample Number	Sample Depth	Field Reading	Depth to Water	Boring Depth	Soil Description
						0	Asphalt
						1	Medium brown, hard, clayey GRAVELS w/fine sands, dry (Fill materials)
						2	
						3	
						4	
		CSB3-1				5	Medium brown,loose, med-fine grained SAND, sl. Silty, sl. Clayey, dry (SM/SC)
						6	
						7	
						8	Dark brown, stiff, silty CLAY, petroleum hydrocarbon odors 7'-8', dry (CL)
						9	Medium brown-gray, firm-stiff, sl. Silty, CLAY, strong petroleum hydrocarbon odors, sl. Sheen (CL) *Groundwater ATD 11' bgs* Wet
						10	
		CSB3-H2O			▽	11	
						12	
		CSB3-2				13	Medium brown-gray, soft, clayey SILT (ML)
						14	
						15	Dark brown, loose, med-fine grained SAND, strong petroleum hydrocarbon odors, wet (SP)
						16	Total Depth (TD) 15' bgs
						17	
						18	
						19	
						20	

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Boring Number:	CSB4	Sheet Number:	1	of	1
Job Name:	Clean Scapes		Date:	4/3/2009	
Client:	R&A Properties. LLC				
Location:	7303 8th Avenue South, Seattle, WA				
Casing Depth:	NA	Surface Elevation:	~4' lower the CSB3	Water Levevl:	
Well Screen Size:	NA	Drilling Type:	Direct Push	6' ATD	
Surface Conditions:	Asphalt			Drilling:	
		Longitude:	NA	Start	Finish
		Latitude:	NA	Time: 1100	1125
		Comments:	Up-gradient of former UST excavation		

Inches Driven	Inches Recovered	Sample Number	Sample Depth	Field Reading	Depth to Water	Boring Depth	Soil Description
						0	Asphalt
						1	Medium brown, loose, fine-med. grained SAND, sl. Silty, dry (SM)
						2	
						3	
						4	
						5	
		CSB4-1			▽	6	Medium brown, loose, fine-med. grained SAND, sl. Silty, dry *Groundwater level ATD 6' bgs*
						7	
						8	Gray, soft, sl. Silty CLAY, moist faint petroleum hydrocarbon odor
		CSB4-H2O				9	Gray-brown, soft to stiff, sandy CLAY to clayey SAND, wet (CL/SC)
						10	
						11	Faint petroleum hydrocarbon odor
						12	
		CSB4-2				13	Medium brown, loose, fine-med. grained SAND, sl. Silty, wet, faint petroleum hydrocarbon odors (SM)
						14	
						15	Total Depth (TD) 14' bgs
						16	
						17	
						18	
						19	
						20	

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Boring Number:	CSB5	Sheet Number:	1	of	1
Job Name:	Clean Scapes		Date:	4/3/2009	
Client:	R&A Properties. LLC				
Location:	7303 8th Avenue South, Seattle, WA				
Casing Depth:	NA	Surface Elevation:	NA		Water Levevl:
Well Screen Size:	NA	Drilling Type:	Direct Push		9' ATD
Surface Conditions:	Asphalt				Drilling:
		Longitude:	NA		Start / Finish
		Latitude:	NA	Time:	1141 / 1208
		Comments:	SE end of concrete AST pad @ asphalt patch.		

Inches Driven	Inches Recovered	Sample Number	Sample Depth	Field Reading	Depth to Water	Boring Depth	Soil Description
						0	Asphalt
						1	Crushed gravels w/medium grained sand (Fill Materials)
						2	
						3	
						4	Medium brown, loose, fine-med grained SANDS, w/fine pebble gravels, moist (SP)
						5	Medium brown-gray, sandy, pebble size gravels, & asphalt debris, moist (Fill Materials) No petroleum hydrocarbon odors No sample collected due to insufficient fine materials
						6	
						7	
						8	
						9	Sandy gravels & concrete debris, wet (Fill Materials) No petroleum hydrocarbon odors No soil sample collected due to insufficient
		CSB5-H2O				10	
						11	Drilling refusal @ 10' bgs *Groundwater level ATD 9' bgs*
						12	
						13	
						14	
						15	
						16	
						17	
						18	
						19	
						20	

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Boring Number:	CSB6	Sheet Number:	1	of	1
Job Name:	Clean Scapes		Date:	4/3/2009	
Client:	R&A Properties. LLC				
Location:	7303 8th Avenue South, Seattle, WA				
Casing Depth:	NA	Surface Elevation:	NA		Water Level:
Well Screen Size:	NA	Drilling Type:	Direct Push		7.0' ATD
Surface Conditions:	Asphalt				Drilling:
Longitude:	NA			Start	Finish
Latitude:	NA		Time:	1212	1240
Comments:					

Inches Driven	Inches Recovered	Sample Number	Sample Depth	Field Reading	Depth to Water	Boring Depth	Soil Description
						0	Asphalt
						1	Crushed gravels and sand (Fill Material)
						2	
						3	Medium brown, loose, fine-med grained SANDS, sl. Silty, dry (SM)
						4	
						5	
		CSB6-1				6	Medium brown, loose, fine-med grained SANDS, sl. Silty, dry
					▽	7	
						8	Dark gray, firm, sl. Sandy CLAY, wet Medium petroleum hydrocarbon odor (CL)
		CSB6-H2O				9	Medium brown w/gray, firm, sl. Sandy CLAY, wet Strong petroleum odors (CL) *Groundwater level ATD 7' bgs*
						10	
						11	
						12	
						13	Medium brown w/gray, firm, sl. Sandy CLAY, wet Strong petroleum odors (CL)
		CSB6-2				14	
						15	Medium brown,w/gray,loose, fine-med. Grained SANDS, sl. Clayey, wet Strong petroleum hydrocarbon odor/sheen (SC)
						16	
						17	Total Depth (TD) 16' bgs
						18	
						19	
						20	

Attachment E

Professional Qualifications

Attachment E
Professional Qualifications

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Company Licenses & Insurance

Environmental Management Services, LLC (EMS) is a Washington licensed Limited Liability Company. EMS maintains $2,000,000 in general liability, professional liability (E&O) and pollution liability insurance (Insurance Certificate Attached).

Washington State Contractors License Number: (b) (6)
Washington State UBI Number: 602-178-517
Federal Tax ID: (b) (6)

Stephen M. Spencer
Principal

Mr. Spencer started his career in the environmental services and construction industry in 1987. During his career, he has worked on and successfully completed projects in many varied aspects of the environmental industry. During the past five years, as principal and senior project manager, Mr. Spencer has successfully completed projects for clients throughout the west coast. His forte is in facility assessment, due diligence investigation, health & safety program development and remediation management.

Mr. Spencer has established positive working relationships with regulatory agencies throughout the west coast, affording his clients a superior level of confidence in his approach to their specific project.

Mr. Spencer's skills as a project manager frequently result in significant savings in both time and budget to his clients. He is proficient in report writing providing a clear, concise detail of project activities including supporting documents and figures. His client's have ranged from property owners and facility operators to the regulatory agencies themselves. Mr. Spencer's overall understanding of environmental compliance requirements provides a unique perspective on assessing potential and realized environmental risk and a creative understanding of remediation technique.

Robin P. Hamlet, L.G. / L.HG
Sr. Project Manager

- State of Washington Licensed Geologist/Hydrogeologist
- Ecology Licensed Washington State Site Assessor
- Ecology Licensed UST Decommissioning Supervisor
- AHERA Licensed Building Inspector

- OSHA Hazardous Materials & Emergency Response Certified

Robin P. Hamlet is a Licensed Geologist and Hydrogeologist in the State of Washington. Mr. Hamlet has 30 years experience in the geological sciences with over 25 years providing professional environmental consulting services. Mr. Hamlet has been involved with environmental investigations working on Environmental Protection Agency (EPA), United States Navy and Air Force environmental projects, as a project geologist and project manager. As a Senior Project Manager in the private sector, Mr. Hamlet has performed multiple Phase I and Phase II Environmental Site Assessments; including geophysical surveys, soil and groundwater studies and has managed the design and implementation of soil and groundwater remediation projects.

As a Washington State Licensed Underground Storage Tank (UST) Decommissioner and Site Assessor, Mr. Hamlet has managed multiple UST decommissioning and remediation projects, has prepared proposals, final reports, budgets, contracts with subcontractors, negotiated with prospective clients, and coordinated activities with regulatory agencies. Mr. Hamlet has been involved in training personnel in environmental field operations and Health & Safety programs, has working knowledge of state (NW states) and federal environmental regulations and the ASTM standards. As an AHERA Building Inspector, Mr. Hamlet has performed hazardous materials surveys, air monitoring projects as well as providing asbestos abatement projects.

James E. Corcoran, P.E.
Sr. Project Manager / Sr. Project Engineer - Principal, Summit Design Group, LLC

- Bachelor of Science - Civil Engineering - Oregon State University - 1991
- Washington State Registered Professional Engineer – 1999
- OSHA Hazardous Materials & Emergency Response Certified

Mr. Corcoran has 17 years of experience in Civil Engineering and Project Management. For the past three years, Mr. Corcoran has been the principal of a consulting business that provides civil engineering consulting and site development services including:

- Critical Areas Review
- FEMA floodplain study
- State Environmental Policy Act (SEPA) checklist
- Stormwater Pollution Prevention Plans (SWPPP)
- Spill Prevention, Control, and Countermeasure (SPCC) plans
- Temporary Erosion/Sediment Control (TESC) plans
- Permanent soil stabilization and precise grading plans
- Surface water collection, detention, retention, treatment, and infiltration design

- Construction coordination with utility purveyors
- Site inspection to verify conformance with design intent and contract documents

Mr. Corcoran has provided civil engineering consulting and stormwater management on residential, commercial, and industrial development projects in multiple Washington state jurisdictions including the City of Tacoma, the City of Lacey, the City of Kent, Pierce County, and King County. Specific projects that Mr. Corcoran provided engineering service include:

- Preparing a TESC plan, SPCC plan, and surface water drainage collection and treatment system for a proposed petroleum products recycling process facility which discharges to a municipal storm sewer located in the Port of Tacoma
- Preparing a SEPA checklist, TESC plan, SPCC plan and surface water drainage collection and treatment system for a proposed privately owned fueling facility, which drains to an environmentally sensitive wetland in the City of Kent.
- Preparing a TESC plan, and permanent surface water drainage retention and treatment system, which infiltrates to site soils underlying a proposed commercial retail center in Pierce County.
- Preparing a TESC plan and permanent surface water drainage collection and treatment system which discharges to a municipal storm sewer in the City of Tacoma.
- Preparing a TESC plan and permanent surface water drainage collection, detention and treatment system for a proposed supermarket and commercial retail center located on the Key Peninsula.

Collette Foley, B.S. Geology
Environmental Scientist / Geologist

- Ecology Licensed Site Assessor
- Ecology Licensed UST Decommissioning Supervisor
- AHERA Licensed Building Inspector
- OSHA Compliance Supervisor
- OSHA Hazardous Materials & Emergency Response Certified

Ms. Foley has been conducting Phase I and II Environmental Site Assessments of commercial, industrial, multi- and single-family residential properties throughout western Washington since 2004. Ms. Foley performs a variety of activities associated with completing due diligence investigations including, but not limited to current and historical site research, regulatory agency file reviews, and subsurface investigations including drilling soil borings and installing monitoring wells to determine the presence and outcome of contamination in soil and groundwater.

Additionally, Ms. Foley completes asbestos "*Good Faith*" surveys prior to demolition or renovation of buildings; conducts project oversight for UST removals; and provides extensive

environmental consulting as requested. Ms. Foley received her Bachelors degree in Geology and Environmental Science in (b) (6) and has over two years experience as a field geologist / hydrogeologist performing regional hydrogeologic characterization and production well drilling.

Gina Mulderig, B.S. Chemistry
Environmental Scientist / Chemist

- Ecology Licensed Site Assessor
- Ecology Licensed UST Decommissioning Supervisor
- AHERA Licensed Building Inspector
- Certified Erosion and Sediment Control Lead
- OSHA Hazardous Materials & Emergency Response Certified

Ms. Mulderig received her Bachelors degree in Chemistry from the (b) (6) Ms. Mulderig has been working in the environmental regulatory compliance field since 1985, starting her career with a position as an environmental analyst for Weyerhaeuser Company. Her fifteen year position at Weyerhaeuser required a thorough knowledge of environmental regulatory compliance, focusing on groundwater monitoring, waste management, storm water management and facility compliance audits.

Ms. Mulderig worked with two local environmental services / consulting firms from 2000 until 2007, greatly increasing her overall regulatory compliance, hydrogeology and environmental engineering knowledge and experience.

Her position with EMS as a Project Manager / Environmental Scientist will provide a vast knowledge base to EMS clients in multiple areas of regulatory compliance and environmental science.

Kaitlyn Allegretti, B.S. Geology
Environmental Scientist / Technician

- Ecology Licensed UST Decommissioning Supervisor
- Ecology Licensed Site Assessor
- AHERA Licensed Building Inspector
- OSHA Hazardous Materials & Emergency Response Certified

Ms. Allegretti serves as a site manager and field technical for EMS. Ms. Allegretti graduated from the University of Dayton (2005) with a Bachelor's degree in Geology. Ms. Allegretti's primary responsibilities are field work including monitoring well sampling, underground storage

tank closure and decommissioning and asbestos inspections. Ms. Allegretti was licensed as an AHERA building inspector and UST Decommissioner within the first 60 days of her employment.

During her two years with EMS, Ms. Allegretti has completed in excess of fifty Phase I Environmental Site Assessments and in excess of 20 commercial underground storage tank closure projects.

Syed K. Hasan, B.S. Environmental Science (Sub-Consultant)
Industrial Hygienist

- Washington State Licensed Risk Assessor
- EPA Licensed Risk Assessor
- AHERA Licensed Building Inspector

Mr. Hasan has worked in the environmental services business since 2001. He is a licensed asbestos building inspector and lead paint risk assessor. He has completed hundreds of asbestos and lead paint assessment projects for residential and commercial properties throughout Washington State. As a project manager, Mr. Hasan has managed multiple projects for private parties as well as government agencies. His forte is working on difficult project schedules with a exemplarily record meeting his clients time frame requirements.

Mary Loftfield, M.S. Environmental Science (Contract Employee)
Environmental Scientist

- Ecology Licensed Site Assessor
- AHERA Licensed Building Inspector

Mary Loftfield is a soil scientist trained in the assessment, research and design, and field implementation of bioremediation solutions for site clean-up. She has had five years of experience designing supervising remediation projects in the Pacific Northwest. Ms. Loftfield also has extensive experienced in laboratory and field techniques for the evaluation and analysis of water quality, soil and plant chemistry, and microbiology. She specializes in soil and plant remediation (phytoremediation).

Working through the voluntary clean up program Ms. Loftfield has successfully used bioremediation strategies she developed and tested in the laboratory and greenhouse in the field. She successfully used soil amendments to sequester and degrade pollutants in the soil, preventing them from harming human health and the environment. Research into phytoremediation (plant remediation) resulted in field projects using tress to take up and

degrade chlorinated solvents and using rhizosphere (rooting zone) remediation to degrade hydrocarbons. Ms. Loftfield's' extensive understanding of environmental chemistry and risk assessment as well as her knowledge of passive remediation strategies offer another approach site investigations and cleanups under the Model Toxics Control Act (MTCA) and corrective Action under RCRA/Dangerous Waste.

James D. Coppernoll, L.G. / L.HG (Sub-Consultant)
Licensed Geologist / Hydrogeologist

- Washington State Licensed Geologist and Hydrogeologist
- Ecology Licensed Site Assessor

James D. Coppernoll is a Washington State licensed Geologist and Hydrogeologist with thirteen years of experience practicing environmental geology in the Northwest. During his career, Mr. Coppernoll worked with clients ranging from major oil companies and national corporations to local businesses to identify, manage, and resolve their environmental problems and helped local agencies, businesses, and individuals with their environmental, geological, and regulatory issues.

Mr. Coppernoll has conducted various environmental and geological investigations ranging from numerous Phase I Environmental Assessments to contaminated site investigations and remedial planning and implementation as well as land use and development studies in Washington, Oregon, Idaho, Montana, and Alaska, and has frequently acted as a regulatory liaison and client representative in third-party negotiations.

Mr. Coppernoll managed all phases of assessment and remediation at dozens of retail and bulk fuel facilities for major oil companies in the Northwest including: excavation and disposal of contaminated soil; free product recovery; feasibility studies; and design, installation, and operation/maintenance of in-situ soil and ground water remediation systems. Mr. Coppernoll managed many of these sites from initial assessment through remediation and closure with the state.

Mr. Coppernoll has conducted geological investigations and assessments for diverse property development projects in the northwest including landfills, hot springs, and residential properties. The purpose of these assessments and investigations was to provide professional and reliable information for use in developing sensitive areas properties.